AGENDA ITEM E-3

# CITY OF LODI
# COUNCIL COMMUNICATION

**AGENDA TITLE:** **Approve Plans and Specifications and Authorize Advertisement for Bids for Domestic Outfall Sewer Pipeline Condition Assessment**

**MEETING DATE:** **September 20, 2006**

**PREPARED BY:** **Public Works Director**

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**RECOMMENDED ACTION:** That the City Council approve the plans and specifications and authorize advertisement for bids for the above project.

**BACKGROUND INFORMATION:** The Domestic Outfall sewer pipeline currently conveys an average of 6.5 million gallons per day (mgd) of domestic wastewater flows from town to the White Slough Water Pollution Control Facility (WSWPCF). The pipeline is one of the City's most essential and critical facilities. The 40-year old pipeline is approximately 33,000 linear feet long and is constructed of reinforced concrete pipe. The pipeline ranges in size from 36-inch diameter to 48-inch diameter and extends along a diagonal course bisecting roads, vineyard and other croplands.

Concrete pipe used for sewage deteriorates due to hydrogen sulfide reactions. (The City stopped using concrete pipe for sewers decades ago.) Staff and various consultants have monitored portions of the line since the late 1970's. In 2003, our consultants recommended a chemical addition pilot test which due to the pipeline, alignment and wastewater characteristics, proved that chemical addition was not a cost-effective alternative for controlling corrosion in the pipeline. A short portion of the pipeline near the White Slough facility failed and was replaced in early 2006.

The proposed rehabilitation project will be separated into multiple phases of work. Phase 1 includes assessing the condition of the entire outfall pipeline using closed circuit television (CCTV) equipment and pipe penetration testing. The CCTV assessment will visually document the condition of the outfall pipe and measure the pipe thickness at selected locations. Since hydrogen sulfide corrosion effectively turns the concrete pipe into a paste-like consistency and thus compromises the structural properties of the material, pipe penetration testing will provide information to estimate the actual thickness of sound concrete that is remaining in the pipeline cross-section. Data collected during the assessment will facilitate the preparation of pipeline rehabilitation alternatives that would best fit the pipeline condition.

Subsequent work, both in terms of scope and timing, will depend on the results of the Phase 1 investigation.

**FISCAL IMPACT:** The FY 06/07 Capital Budget has appropriated $430,000 toward Phase 1 and Phase 2. Phase 3 will cost roughly somewhere in the $6 to $10 million range, depending on the rehabilitation method. Financing this work will be considered along with the White Slough Treatment Facility Phase 3 improvements.

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APPROVED: _____
Blair King, City Manager

**FUNDING AVAILABLE**: Estimated Project Cost: $80,000
Wastewater Fund approved in 06/07 Capital Budget

for James R. Bunn
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